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Maine Public Advocate Office

ELECTRICITY GUIDE

Maine Public Advocate Office Volume 9 — November 2004

NEW GREEN RETAIL SUPPLY PRODUCTS

Last month, Maine Interfaith Power and Light (MeIPL), a non-profit company, introduced two new electricity supply products to compete with the standard offer. These products are called "MRE Green Supply 2" and "MRE Green Supply Plus". Both products are priced at a level expected to be about a penny to a penny and a half higher than the new standard offer. [see standard offer article below] MRE, or "Maine Renewable Energy", is the company that procures this power for MeIPL.

Enclosed with this Electricity Guide is a brochure prepared by MeIPL that we agreed to distribute to our readers. This brochure contains more information about green power and includes a card to use to sign up for their products. You may also sign up online at www.meipl.org. We agreed to enclose the brochure and to do this article for three reasons. First, it is a unique offering since there are no other competitors for residential customers. Second, the more people who purchase green power, the better will be the air quality in New England. Finally, the more green power is used, the less dependent we are on foreign oil.

Perhaps you are one of the 2500 or so Mainers who purchased the green power product originally offered by MeIPL in January 2003. This product is no longer available for newcomers, and those who signed up will continue to receive it, at the original price of 6.5 ¢/kWh, through the end of February. If you were an original purchaser and you wish to continue to buy green, you will need to sign up for one of

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Two New Green Products

MRE Green Supply 2: Price: 8.2¢/kWh* through February 2008. Source: 100% hydro from Lisbon's Worumbo Mill Dam.

MRE Green Supply Plus: Price: 8.7¢/kWh* through February 2008. Source: 80% hydro from Lisbon's Worumbo Mill Dam, 20% from new wind power.

**NOTE:* MeIPL makes the following price disclaimer: "MRE will make every effort to hold these prices as long as possible. However, due to market changes, the price of both products may vary over time. Maine Interfaith Power & Light's website will show current prices for both products." In other words, these prices may change. Once you sign up, the contract price will not change for the duration of your contract with MeIPL.

LIKELY STANDARD OFFER PRICE INCREASE COMING MARCH 1, 2005

The current standard offers for CMP and BHE residential customers both expire the last day of February 2005. We do not yet know the price for the next standard offer, but all signs indicate that it will go up significantly. This bad news results from the world price for natural gas which, because of the number of generators that use this fuel, sets the price for electricity in New England. The price for natural gas, in turn, is heavily influenced by the world oil price. (See chart on page 5.) The futures market for electricity supply in New England currently indicates that the next standard offer prices could be as much as 2¢ higher, perhaps even higher. This would mean at least a 7¢/kWh price. The PUC has begun efforts to hold the auction for the next standard offer, but will probably not make its final decisions until much later this year.

The PUC is using a more flexible standard offer bid process than in the past. Partly as the result of a request from the Public Advocate and the AARP, the Commission is seeking staggered rather than single bids. In other words, each bidder is being asked to bid up to five different "strips" of power. The first "strip" would be for one year, the next for two, the third for three, etc, with all beginning March 1. As each "strip" expires, the PUC will solicit replacement bids. This will allow for a more average, stable price over time. This will tend to reduce price spikes that occur. It may also, of course, counter the effect of periodically low prices. The PUC is holding open the option to sign up one single "strip" for one year; three steps for three years or five steps for five years. For a more detailed view, please consult the PUC's website at http://www.maine.gov/mpuc/.

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(continued) these new products -- there will be no automatic reenlistment. Contact MeIPL now and you will begin to receive the new product beginning on March 1, 2005 after your current contract expires.

MeIPL's original green supply came 50% from small hydro and 50% from biomass, all from Maine. MeIPL's two new products come 100% from zero emission sources.

MRE Green Supply 2 will come entirely from the Worumbo Dam in Lisbon Falls. Worumbo Dam is the only Low Impact Hydro Institute-certified small hydropower dam in the state of Maine. During any routine or unexpected outages at this plant, replacement power will come from other dams in Maine.

MRE Green Supply Plus is produced 80% from the Worumbo Dam and from 20% new wind electricity. The extra price for this product reflects the increased value (and cost) that comes with building and promoting new renewable power.

INTERNET THROUGH AN ELECTRICAL OUTLET?

What would it be like to have a high-speed Internet connection that was always on and that you could access anywhere you had an electrical outlet? A technology known as broadband over the power lines (BPL) promises to provide consumers with that very service. While it may be a while before it comes to Maine, there are currently about four dozen pilot programs deploying this technology, including one in Cincinnati, Ohio where over 16,000 consumers are experiencing broadband Internet comparable to both cable and DSL. There are also at least four fully commercial offerings in other states.

It works like this. The information signal rides along the power line but at a different frequency than the electricity. In order to reach your home, the electric utility must install devices to route the signal around existing electrical transformers. Once this is done, customers simply obtain a specialized modem one end of which plugs into any socket and the other goes to a computer.

Problems with full-scale deployment of BPL include the lack of standardized hardware in the BPL industry and the complaints of ham radio and other high frequency transmitters who assert that BPL interferes with their transmissions. An effort is currently underway dealing with the first issue, and the Federal Communications Commission (FCC) in Washington, a supporter of BPL, has recently issued a rule to deal with the second. Once these two issues are resolved (the rule may be appealed), we may see more BPL activity.

One of the main benefits of BPL would be the increase in competition for broadband access. The price of BPL is likely to be comparable to cable and DSL services. Another consumer benefit of BPL is that uploading speeds match the download speeds, an improvement over current services that only offer this option at much higher price.

Electric utilities and their customers may also benefit as well, as BPL may lead to automatic meter reading, better understanding of outages and more information to help balance the electricity load during peak demand hours. Though there are still a few hurdles for BPL to jump, and possibly several years to wait, it is possible that BPL will be a major part of future technology.

None of Maine's investor-owned utilities have any current plans to offer BPL though each has said it is monitoring developments. Bangor Hydro has indicated that it would consider offers from BPL providers who wished to use their system for delivery of BPL.

SOLAR RESOURCES IN MAINE

Have you ever thought about installing a solar roof or system on your home? Here are some facts and tips to think about.

Photovoltaic (PV) refers to electricity generated directly from sunlight using panels wired directly to your home's electric system. This article discusses PV, not other uses of sunlight like solar hot water or space heating. For further information on PV go to the following US Department of Energy website: http://www.eere.energy.gov/solar/photovoltaics.html

What is the Cost? The cost of installing a photovoltaic (PV) system on your house will depend on the type of system you want, how much power you want it to produce, and the difficulty of installation, all of which are dependent on the unique characteristics of your home. The cost varies between $7 and $10 per installed watt of power. Thus, a 2 kW system would cost between $14,000 and $20,000, not including batteries. Obviously, the analysis should not stop there, as you may be able to recover some or all of this investment over a term of years in the amount of utility bills you would avoid. This is a complicated analysis with many factors. At a minimum, consider the following incentives.

First, Maine law allows for "net metering". A solar home may be connected to the electric grid. If it is grid-connected, the electric company has to allow your electric meter to run both forward and backwards allowing you to both take electricity from and return electricity to the grid. A net-metering consumer is allowed to "bank" for 12 months the difference between the energy their system has produced and the amount they take from the grid. During these 12 months, you may use one month's surplus generated by your rooftop system to reduce or eliminate a subsequent month's deficit. After 12 months, if you owe the utility money, you must pay the balance, but if the balance is on the side of the utility they do not have to pay you. This protects homeowners from licensing and regulation issues and is also intended to keep homeowners from installing PV systems that are larger than their needs.

Another incentive is that you may be able to sell the solar (or green) attributes of your system. In other words, because your PV system generates electricity without burning fossil fuels, it has value. There is now a market for "green tags" which are simply certificates that represent this value. While it is impractical, if not impossible, for individual homeowners to find buyers for their tags, there are brokers who may be willing to buy them from you for resale. One national program is Mainstay Energy Rewards, which buys three, five, or ten years worth of green tags for a one-time payment of up to $170 per kW. Mainstay Energy, a private company, runs the program.

Finally, there may be incentives for Maine residents in the availability of federal loans from multiple government agencies, which help provide loans for installation of renewable energy. To search for incentives in a different state or updates for the state of Maine, including a description of the Mainstay energy rewards, check out the Database of State Incentives for Renewable Energy at http://www.dsireusa.org.

Is there enough sun in Maine? It may seem as if Maine winters are too long and cold and the sun too low in the sky for solar energy to be worthwhile. It seems, however, that we make up for the decreased power of the sun up here in the north because it shines more often. In a study done by Sun Wize Technologies, a company that sells solar panel systems, Portland has a higher year around average of sunlight hours than 40 out of 100 cities included in the study. Caribou also did well in this study, having a higher average than 26 cities. Some of the more southern cities with lower averages were Washington, D.C., Pittsburgh, Pennsylvania, and Richmond, Virginia. This means Maine can be a good place for solar power.

Who can I talk to? There are many resources for solar technology in Maine, including many Maine based companies, a list of which can be found below. Another resource is the Maine Solar Energy Association (MESEA) which has both a website and newsletter. MESEA and the Maine Public Utilities Commission have also offered educational seminars on solar products building and installation. They are likely to offer these again as solar technology gains importance over the coming years.

Environmental and political benefits. In the long term, the initial investment in the technology may pay for itself; it may actually be cheaper than conventional generation. The up front costs are high, but the yearly maintenance costs are low, and the sunlight is free. The benefits that you can't put a price on are those that help the environment. Solar power burns no fuel and thus has zero emissions, reduces local air pollution, offsets greenhouse gases (which are responsible for global climate changes), conserves energy, and also reduces the need for dry-cell battery disposal. Finally, consider that many conventional generation methods consume non-renewable resources that must be imported, making us dependant on other countries. Finally, one other benefit: during prolonged power outages, you would have electricity if the sun shines or if you have battery back up.

House combines state-of-the-art energy efficient construction with solar hot water and solar electric systems to significantly reduce the amount of energy required from the local utility.

Further information. For more information, consider the following resources:

These roof shingles are coated with PV cells made of amorphous silicon. When installation is complete, the PV shingles look much like ordinary roofing shingles, but they generate electricity.

In Maine:

Maine State Energy Program: a division of the Maine Public Utilities Commission, 18 SHS Augusta, ME 04333-0018, ph. 287-3831 website: http://www.state.me.us/msep/index.html

Applied Solar Concepts: Energy conservation products and services, solar heating, solar electric systems: 103 3rd St., Bangor, ME 04401, ph. 207-942-8036

Central Maine Solar: PV systems and installation: P.O. Box 56, Athens, ME 04912, ph. 207-474-8845

Dandy Solar Electric: PV systems and installation: P.O. Box 142, Prospect Harbor, ME 04689, ph. 207-963-7286

The Greenstore: PV systems, solar hot water, energy efficient appliances and more: 71 Main St., Belfast, ME 04915, ph. 207-338-4045, website: http://www.greenstore.com

Penobscot Solar Design: PV systems and installation, fully licensed electricians: 569 Back Ridge Rd., Penobscot, ME 04476, ph. 207-326-0779, website: www.penobscotsolar.com

Talmage Solar Engineering/Blue Link Solar: PV systems and installation, mail order catalog: 25 Limerick Rd., Arundel, ME 04046, ph. 877-785-0088, website: www.solarmarket.com or www.blueinksolar.net

Outside Maine, Mail Order Catalogs:

New England Solar Electric: PV equipment and appliances: P.O. Box 435, 401 Huntington Rd., Worthington, MA 01098, ph. 800-914-4131, website: www.newenglandsolar.com

Sunnyside Solar: PV seminars, PV equipment and appliances: 1014 Green River Rd., Brattleboro, CT 05301, ph. 802-254-4670, website: www.sunnysidesolar.com

Sunweaver: PV systems, solar hot water, appliances: 1049 1st NH Turnpike, Northwood, NH 03261, ph. 603-942-5863, website: www.sunweaver.org

Real Goods/Jade Mountain: PV systems, appliances and more: Real Goods/Jade Mountain, Customer Services, 360 Interlocken Blvd., Suite 300, Broomfield, CO 80021-3440, ph. 800-762-7325, website: www.realgoods.com

Many thanks to Stephanie Abbott who helped to research and write the articles on broadband and solar power. Stephanie, who grew up in Brooks, Maine, was our summer intern, and is now back at Wellesley College for her junior year.

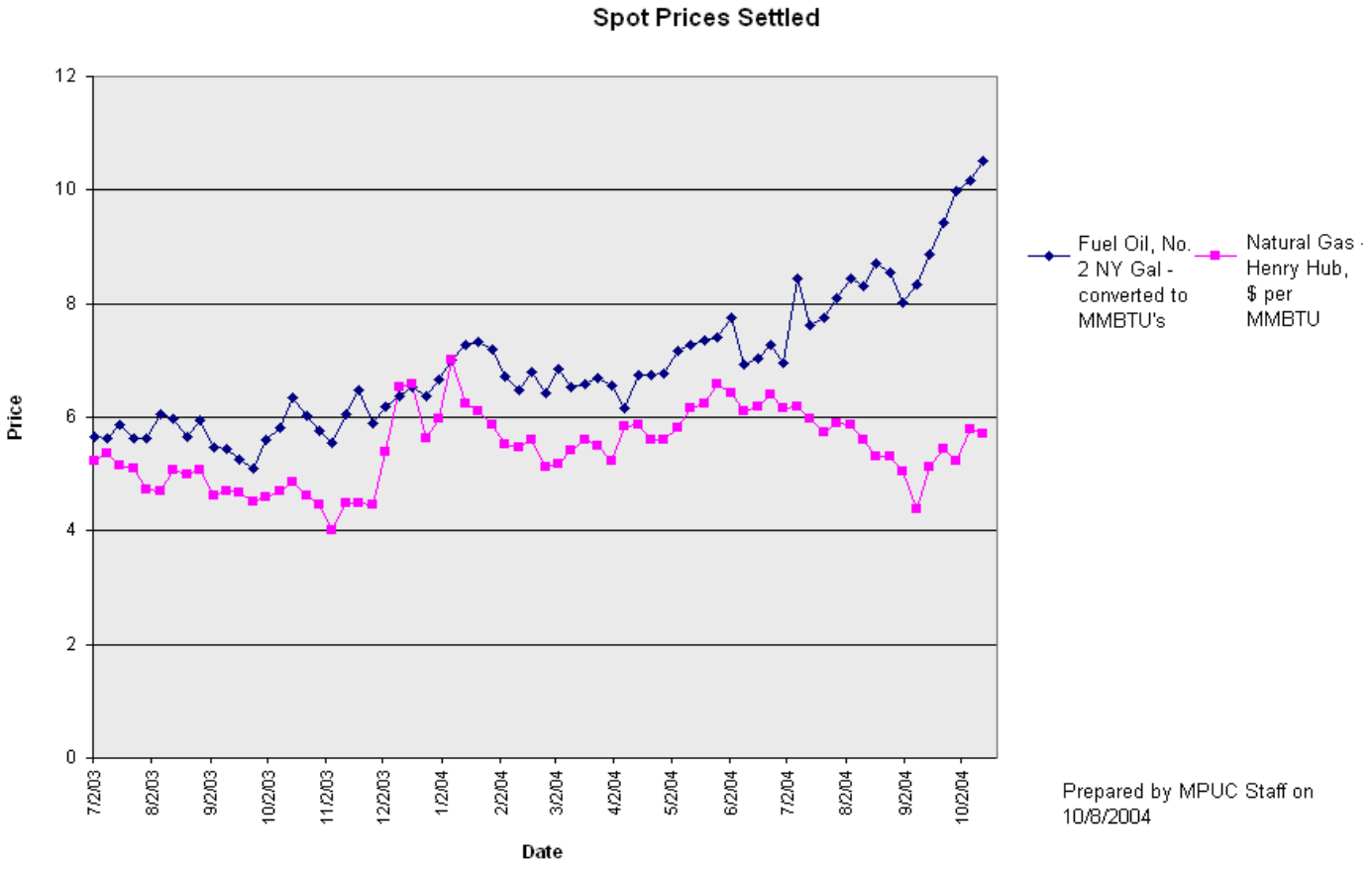
REGIONAL GREENHOUSE GAS INITIATIVE: AN UPDATE

In the spring of 2004, a coordinated effort began in the Northeast to come to terms with the major underlying causes of global warming - hopefully with as much success as previous regional programs to control acid rain and NO_x and SO_2 pollution. Those previous efforts are credited with major reductions in pollutants that created the acid rain phenomenon. Those programs relied on a "cap-and-trade" system where total allowances for the emission of NO_x and SO_2 from power plant smokestacks and other sources were "capped" at a historic level with permission for individual sources to buy and sell "trading" allowances.

Public Advocate Steve Ward has served since June 2004 as a member of the Stakeholder Group of the Regional Greenhouse Gas Initiative (RGGI), providing advice to the environmental and utility regulators who are pursuing this strategy. RGGI is an effort of nine Northeast states (New York, New Jersey, Vermont, Massachusetts, Maine, New Hampshire, Rhode Island, Connecticut and Delaware) along with observers from the Canadian Maritimes, Pennsylvania and Maryland, to design a regional system for allowance trading for greenhouse gas emissions in the context of a regionally-mandated cap on such emissions. This initiative is consistent with previous actions taken jointly by the New England governors and Canadian Maritimes Premieres.

At a series of quarterly meetings, the RGGI Workgroup of regional regulatory officials meets with 34 stakeholders and alternates representing industrial users of power, generators of electricity, local utilities, consumer advocates and environmental organizations. At these meetings the Workgroup is making progress in finalizing a cap-and-trade system for the nine participating RGGI states. We expect this system, when implemented next year, to substantially reduce the release of greenhouse gases over time.

There may be some price impacts for electricity consumers as the costs of the RGGI program are reflected in wholesale power rates. However, because Maine is a regional leader in the generation of renewable power and in the implementation of electricity efficiency programs, price impacts may be substantially smaller here than in other states. In fact, because of the ability to trade allowances, generators of renewable power in Maine will command a substantially higher price for their output with the implementation of RGGI. This will mean a positive economic impact for much of rural Maine.



Maine Public Advocate Office
112 State House Station
Augusta, ME 04333

MAINE PUBLIC PROPOSES A NEW TRANSMISSION LINE

Maine Public Service has asked the Public Utilities Commission for approval to build a new 138 kv transmission line from the Canadian border in Hamlin to an existing MPS substation in Limestone. This line would be 10.5 miles long on the US side, and would join another new line to be built by New Brunswick Power on the Canadian side. The stated purpose of the line is to create a fourth "tie" between the New Brunswick power grid and the MPS grid. MPS says this new line is needed because beginning in 2006, there may not be enough power generation in the area. This would mean that if one of the existing NB tie lines were to fail, there could be a county-wide blackout. The Public Advocate has intervened in this case and has hired a power expert to examine MPS' case. This case is expected to conclude by early April, 2005.

ABOUT THE PUBLIC ADVOCATE OFFICE

Stephen G. Ward, the Public Advocate, and his staff of seven represent Maine's telephone, electric, gas, and water customers before the Maine Public Utilities Commission, the courts, and federal agencies. Our mission is to work for reasonably priced, safe, and reliable utility services for Maine people.
Website: http://www.maine.gov/meopa (Telephone 287-2445) Email: Eric.J.Bryant@maine.gov